

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/762,769A  
Source: 1Fw16  
Date Processed by STIC: 7/12/06

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 07/12/2006

PATENT APPLICATION: US/10/762,769A

TIME: 09:52:58

Input Set : F:\SEQLIST.TXT

Output Set: N:\CRF4\07122006\J762769A.raw

4 <110> APPLICANT: Melis, Anastasios  
 5 Wintz, Hsu-Ching Chen  
 7 <120> TITLE OF INVENTION: MODULATION OF SULFATE PERMEASE FOR  
 8 PHOTOSYNTHETIC HYDROGEN PRODUCTION  
 11 <130> FILE REFERENCE: BERK-016CIP  
 13 <140> CURRENT APPLICATION NUMBER: 10/762,769A  
 14 <141> CURRENT FILING DATE: 2004-01-21  
 16 <150> PRIOR APPLICATION NUMBER: 60/354,760  
 17 <151> PRIOR FILING DATE: 2002-02-04  
 19 <150> PRIOR APPLICATION NUMBER: 60/377,902  
 20 <151> PRIOR FILING DATE: 2002-05-02  
 22 <150> PRIOR APPLICATION NUMBER: 10/350,298  
 23 <151> PRIOR FILING DATE: 2003-01-22  
 25 <160> NUMBER OF SEQ ID NOS: 16  
 27 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 29 <210> SEQ ID NO: 1  
 30 <211> LENGTH: 411  
 31 <212> TYPE: PRT  
 32 <213> ORGANISM: Chlamydomonas reinhardtii  
 34 <400> SEQUENCE: 1  
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 37 Cys Ile Ala Gly Val Gln Arg Ser Pro Ile Arg Leu Gly Thr Ser Ser  
 38 20 25 30  
 39 Val Ala His Val Gln Val Ser Pro Ala Gly Leu Gly Arg Tyr Gln Arg  
 40 35 40 45  
 41 Gln Arg Leu Gln Val Val Ala Ser Ala Ala Ala Ala Ala Phe Asp  
 42 50 55 60  
 43 Pro Pro Gly Gly Val Ser Ala Gly Phe Ser Gln Pro Gln Gln Gln Leu  
 44 65 70 75 80  
 45 Pro Gln Gln His Pro Arg Gln Pro Gln Ala Val Ala Glu Val Ala Val  
 46 85 90 95  
 47 Ala Glu Ser Val Ser Ala Pro Ala Ser Ala Ala Pro Ser Asn Asp Gly  
 48 100 105 110  
 49 Ser Pro Thr Ala Ser Met Asp Gly Gly Pro Ser Ser Gly Leu Ser Ala  
 50 115 120 125  
 51 Val Pro Ala Ala Ala Thr Ala Thr Asp Leu Phe Ser Ala Ala Ala Arg  
 52 130 135 140  
 53 Leu Arg Leu Pro Asn Leu Ser Pro Ile Ile Thr Trp Thr Phe Met Leu  
 54 145 150 155 160  
 55 Ser Tyr Met Ala Phe Met Leu Ile Met Pro Ile Thr Ala Leu Leu Gln  
 56 165 170 175  
 57 Lys Ala Ser Leu Val Pro Leu Asn Val Phe Ile Ala Arg Ala Thr Glu

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60          195          200          205
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62          210          215          220
63 Val Arg Tyr Asn Phe Ala Gly Lys Lys Ile Leu Asp Ala Ala Val Asp
64 225          230          235          240
65 Leu Pro Phe Ala Leu Pro Thr Ser Val Ala Gly Leu Thr Leu Ala Thr
66          245          250          255
67 Val Tyr Gly Asp Glu Phe Phe Ile Gly Gln Phe Leu Gln Ala Gln Gly
68          260          265          270
69 Val Gln Val Val Phe Thr Arg Leu Gly Val Val Ile Ala Met Ile Phe
70          275          280          285
71 Val Ser Phe Pro Phe Val Val Arg Thr Met Gln Pro Val Met Gln Glu
72          290          295          300
73 Ile Gln Lys Glu Met Glu Glu Ala Ala Trp Ser Leu Gly Ala Ser Gln
74 305          310          315          320
75 Trp Arg Thr Phe Thr Asp Val Val Leu Pro Pro Leu Leu Pro Ala Leu
76          325          330          335
77 Leu Thr Gly Thr Ala Leu Ala Phe Ser Arg Ala Leu Gly Glu Phe Gly
78          340          345          350
79 Ser Ile Val Ile Val Ser Ser Asn Phe Ala Phe Lys Asp Leu Ile Ala
80          355          360          365
81 Pro Val Leu Ile Phe Gln Cys Leu Glu Gln Tyr Asp Tyr Val Gly Ala
82          370          375          380
83 Thr Val Ile Gly Thr Val Leu Leu Leu Ile Ser Leu Val Met Met Leu
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85 Ala Val Asn Gln Leu Gln Lys Leu Ala Arg Lys
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89 &lt;210&gt; SEQ ID NO: 2

90 &lt;211&gt; LENGTH: 3873

91 &lt;212&gt; TYPE: DNA

92 &lt;213&gt; ORGANISM: Chlamydomonas reinhardtii

94 &lt;400&gt; SEQUENCE: 2

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97 gtaagccacc agacactacc aagtagagta atccatttgt ataggtacag aatatggagc 180
98 gagtttgacg ccacacagctt gcctcgctcg gagggaggcc atgcatcgct ggggtgcagc 240
99 ggtcgcccat ccgactaggg acttcaagcg ttgctcatgt gcaggtctct ccggcaggta 300
100 agcaccgcgc tcggcgcgct gtacacatgg ggccgtcagg ccaactgcgt ttgttggtta 360
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102 agctgcggca gcggctttcg accctcctgg aggtgcgtgg cgtgagggct gcacgggtgc 480
103 gggttggcct ggaaccaaag cctcgccacg actacctgca acagcattgc ccgcatctcc 540
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107 gctccccgca ggtgtctccg ccgggttctc gcagccgcaa cagcagctgc cacaacagca 780
108 cccacgcaa ccacaggcgg tggcgagggt agctgtcgcc gagtcagtct cggcgcccgc 840
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110 cggcctcagc gccgtgcccc cgcgccccac cgccaccgac ctcttctccg ccgcggcgcg 960
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112 ctcatgctc atcatgcccc tcaccgcgct gctgcaaaaa gcctcgctcg tgccgctcaa 1080
113 cgtcttcacg gcgcgcgcca ccgagccggt ggcatgcac gcctactacg tcaccttctc 1140
114 ctgctcgctg atcgcgcccg ccatcaactg cgtgtttggc ttcgtgctgg cctgggtgct 1200
115 ggtgcgctac aatttcgcgg ggaagaagat cctggacgcg gcggtggacc tgccgttcgc 1260
116 gctgccgacc tcggtggcgg gcctcacgct tgccacgggtg tacggcgacg agttcttcat 1320
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118 ttagcagctg ggggtccggc agtagttccc gccctagtga ggtcgaaact ataccagaag 1440
119 aagaggacga acatggggct atccagcaag ctgctctagg gaaggaggag tttgggagaa 1500
120 cgggtgggtg ggagggagag ggagggcggt ggctgggagg gaagggtaa gcgggagggg 1560
121 gatggtagca cggggcggtt gggacgcaga aggatgacag gcggtcgacg ggaaggggatg 1620
122 gggaaagcga gctggggaca gtgcgaagag ccgggagaga ggggaagttt gagtccaggaa 1680
123 gaggggctag agaggggcat gcggactcct gctgggattt aggtgcgtgc tcattgagga 1740
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125 ctagacgcgc ggttgggcaa cgagcagagc tgctgtgcgg ctatggatgg aaggcgatgc 1860
126 agcgagcatg tgcagtgaac attggtttga ggacagggga ctccgaggtt gcataggcgg 1920
127 gccgccactg tctctgccgc tagggtgact agctgcctcg aacctggcgg tggccccata 1980
128 cccgcagttg gaggatgctc cacgcgcttc agcttgccat gtctggggtc tgggtctgga 2040
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157 ttgacgcaa tccacggggg ctgtggcttg ggggaggcag ggattgagcg aaggacgcac 3780
158 tgcaagctca ggcagtcgca tgcccgtacc ctgcttctgg tccagtgtgg agacaagact 3840

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161 <210> SEQ ID NO: 3
162 <211> LENGTH: 1984
163 <212> TYPE: DNA
164 <213> ORGANISM: Chlamydomonas reinhardtii
166 <400> SEQUENCE: 3
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168 ctgcgacgat gcaaaagcctt tcttgagcgg gttgatggac tttgctttgt tatctgtcca 120
169 gtaagccacc agacactacc aagtagagta atccatttgt ataggtacag aatatggagc 180
170 gagtttgacg ccatcagctt gcctcgtcgc gagggaggcc atgcatcgct ggggtgcagc 240
171 ggtcgcccat ccgactaggg acttcaagcg ttgctcatgt gcaggctctc ccggcaggcc 300
172 ttgggagata tcaacggcaa agactgcaag tcgtggcgct tgcagctgcg gcagcggctt 360
173 tcgaccctcc tggagggtgtc tccgcccggg tctcgacgcc gcaacagcag ctgccacaac 420
174 agcaccacag ccaaccacag gcggtggcgg aggtagctgt cgcgcagtcg gtctcggcgc 480
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200 gcgc 1984
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203 <211> LENGTH: 1863
204 <212> TYPE: DNA
205 <213> ORGANISM: Chlamydomonas reinhardtii
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209 ctgccctcgc gggtagggcc tcgctccctc ctgtcgcttc caaaaattcc tcgctgtgct 120
210 acgcacacta gtgctccctc tacctcaaag tactgcgact catcatcagt tatagagagc 180
211 acgctagggc ggcaaacatc ggttgccggg agaccatggc ttgcaccccg gcctgcgcct 240

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Output Set: N:\CRF4\07122006\J762769A.raw

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213 catggagggg gcttagggga accggtcgat aattggatca agaagctact cgttggtgtc 360
214 gcggcggcgt acatcggtct ggtcgtgctg gtgcccttcc tgaatgtctt cgtccaggcg 420
215 ttcgccaagg gcatcattcc ctctctggag cactgcgcgg acccggtactt tctgcacgca 480
216 ctcaagatga cgctgatgct ggcgttcgtg acgggtgccgc tcaacacggg gtttggcacg 540
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219 ggccgcaccg gctggttcgc ggcgctgctg cgggagaccg gcatcaacgt ggtgttcgca 720
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221 atccccatcc tggagaacat ggacctgtcg caggaggagg cggcgagaac gctggggggc 840
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224 ggcaacatca tcggccgcac gcagacgctg acgctgttcg tcgagtcgcg ctacaaggag 1020
225 tacaacacgg aggcggcggt cgcgccggct gtgctgctga gcgcgctggc gctgggcacc 1080
226 ctgtggatca aggacaagggt ggaggaggcg gcggcgccgg agagccgcaa gtagagagga 1140
227 gcaggcgcg tccgcagcgg cggcagtggc agcggcagcg gcggagagcg gcagctggag 1200
228 aggagcaggc ggtggcggcg gagcgcgcca aatagagagg tgcagcaagg aggcaggcgc 1260
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232 tgacacgtgt ggcgttctgt tgctggtcgc cgcatgctta acgcagcggg agcagcttct 1500
233 ctgtctgatg tctaaccggg gcgttgtatg ctgataatag acggaggggc aagggagcag 1560
234 gcgcggttca gatggggtaa aagctgttgg aaatcaacac gtgcagcggg tgggttgcac 1620
235 ttgtgatcac tggacgttct gagtgtccg tgcgcctata gcgcgtgctg tgcataatata 1680
236 cgcgcccgcg cgcataaaac atgactgcat gtgtcggtgt tgacggtaca gttatgccgt 1740
237 gccccgtttt acaagcggga tagaggcaca ctccacgtag tatgcattga gccagtaga 1800
238 ctctggtcag aaggccggta aatttacatg tgtcgtggtg aaccctgtaa gtcatggccc 1860
239 aag

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241 &lt;210&gt; SEQ ID NO: 5

242 &lt;211&gt; LENGTH: 2253

243 &lt;212&gt; TYPE: DNA

244 &lt;213&gt; ORGANISM: Chlamydomonas reinhardtii

246 &lt;400&gt; SEQUENCE: 5

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248 gccagctgc gcaagctggc cctgtcgccc aaatggcacc gatggcaagc cgagtgcagc 120
249 cggcgatgcc tagcgcgctg ctcccactgc acgccagagc gacaacaact tcagtgcctt 180
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251 cctccaatgg ggcaggagaa gtgtccatgt ccataatcat catggacgag gttggaccct 300
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261 tggacgggt ggtgcgcaag cagctgcgca cggggctgcg cgagatcggt cgcagcggtg 900
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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 07/12/2006  
PATENT APPLICATION: US/10/762,769A      TIME: 09:52:59

Input Set : F:\SEQLIST.TXT  
Output Set: N:\CRF4\07122006\J762769A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:8; Xaa Pos. 438

VERIFICATION SUMMARY

DATE: 07/12/2006

PATENT APPLICATION: US/10/762,769A

TIME: 09:52:59

Input Set : F:\SEQLIST.TXT

Output Set: N:\CRF4\07122006\J762769A.raw

L:445 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:432